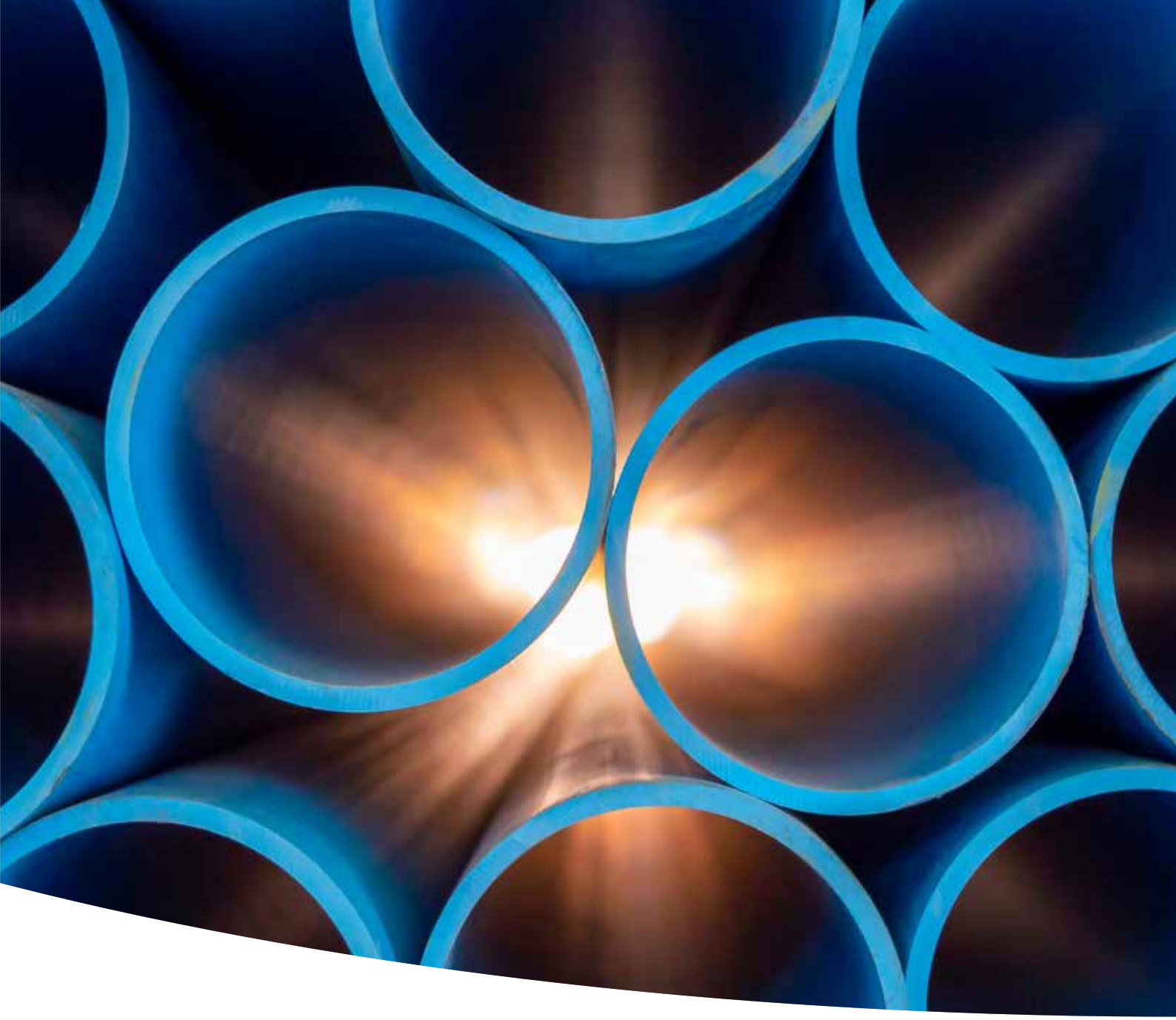


Essential ingredients for PVC production

Trigonox®, Perkadox®, Laurox®, Active®, DCloud®, Ethapol® and Noxol®

Nouryon

Nouryon creates everyday essentials

Nouryon is your partner in essential solutions for a sustainable future

We are a global, specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products, such aspersonal care, cleaning goods, paints and coatings, agriculture and food, pharmaceuticals, and building products. Furthermore, the dedication of approximately 8,200 employees with a shared commitment to our customers, business growth, safety, sustainability and innovation has resulted in a consistently strong financial performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands.

Within our Polymer Specialties business, we produce everyday essentials for the global polymer, recycling and polymer processing industries. We are among the world's leading producers of organic peroxides, metal alkyls and organometallic specialties, which are essential ingredients for the thermoplastic, composite and rubber industries. We are widely known for our world-class products, including Butanox®, Trigonox®, Perkadox® and Ketjenblack® brands.

As a company of innovation, we have recently introduced new initiators, which have an improved performance in selectivity and HSE profile, including Trigonox® 421 and Trigonox® 301. products for example.

A global partner

Our manufacturing sites and distribution centers are found all around the globe. Our global distribution network allows us to deliverour products to you anywhere in the world. That's how we ensure security of supply and easy access to quality products wherever you are.

All our sites are ISO 9001 and ISO 14001 certified to ensure the highest product quality and strict compliance with environmental regulations. We continually invest in manufacturing techniques, high quality standards, safety, innovation, active technical support and a reliable supply chain.

Contributing to a sustainable future

Our Commitment:
We partner with our customers, suppliers and employees to deliver innovative solutions, drive progress and create a safe and sustainable today and tomorrow for everyone.

WE EMPOWER AND ENGAGE

We empower our employees and engage with our suppliers and communities to deliver a positive impact

Key sustainable development goals:

WE INNOVATE AND GROW

We enable growth by meeting customer demand for innovative and sustainable solutions

Key sustainable development goals:

WE OPERATE RESPONSIBLY

We enhance operational excellence and efficiency to continuously improve our safety and environmental performance suppliers, and society to drive sustainable progress

Key sustainable development goals:

Our memberships and partnerships

UN Global Compact · Responsible Care® Good Chemistry at Work · HALLBAR KEMI · ICOS CAPITAL · TOGETHER FOR SUSTAINABILITY

Our ratings

EcoVadis Gold Rating

CDP B score Climate Change

Our ambitions and targets

Safety ambition: Zero injuries and harm

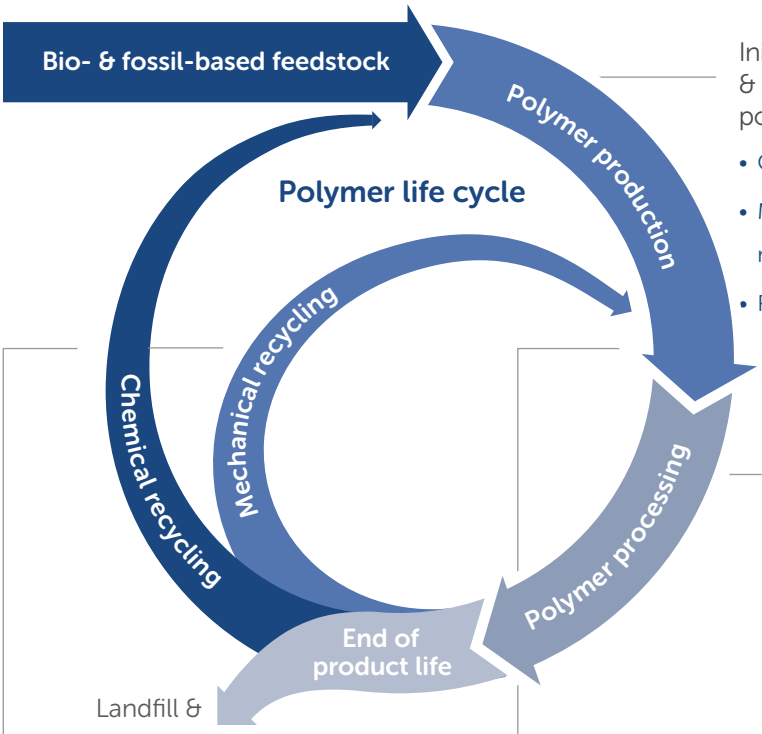
- By the end of 2030, we have targeted reducing our absolute Scope 1 & 2 GHG emissions by **40%**, vs. a 2019 base year
- By the end of 2030, we have targeted reducing our total waste intensity by **10%**, and water consumption intensity by **10%**, vs. a 2019 base year[1]

By 2050, we aspire to be a **net zero** organization

2030 — 2050

Empowering the polymer cycle

Building on a sustainability driven strategy. We deliver essential ingredients that enhance and support the polymer cycle.



Initiators, co-catalysts & additives to produce polymers

- Organic peroxides
- Metal alkyls & complex metalorganics
- Reactor additives


PP LDPE HDPE


PVC


EPS


Acrylic resins

Curatives & additives to create products

- Organic peroxides
- Polymer & processing additives

Modifiers to upgrade polymer properties

- Organic peroxides


Modified polymers


Crosslinked PE


Rubber goods


Composites

Essential ingredients for PVC production

Polyvinyl chloride (PVC) is everywhere in modern society and in a wide variety of applications, including products we use every day like pipes, windows, siding and flooring. It is produced through the polymerization of vinyl chloride monomer with the help of an organic peroxide initiator. Nouryon is the largest global producer of **polymerization initiators** to produce PVC offering a wide range of products like our well-known Trigonox®, Perkadox® and Laurox® brands.

Trigonox® 187, a special fast peroxide, is used in the **Continuous initiator Dosing (CiD)** technology that increases PVC output, improves process safety and the resin quality.

Nouryon also offers various **secondary suspending agents**, which are used to control PVC porosity. This includes solvent-based products and aqueous emulsions under Active®, DCloud® and Ethapol® brand names. A specific Ethapol® (MPG) product is used as an antifoaming agent.

Moreover, we are a global leader in Noxol® and Everplus® **antifouling agents** which are used to prevent the reactor fouling and polymer buildup in the polymerization process.

We have a strategic focus on the PVC industry, having global production assets and a dedicated R&D laboratory. Technical support is provided by a technical staff having significat PVC technology experience and know-how.

Polymerization initiators for PVC

Organic peroxides are used as single initiator or in a combination of initiators to optimize the polymerization rate. The most important criteria for selecting the right initiator are peroxide reactivity, physical form and regulatory status. Most solid and liquid peroxides also are available as water-based suspensions and emulsions with improved safety characteristics.

Food contact approved water-based peroxide suspensions and emulsions have been developed by Nouryon to serve the European PVC industry, whereas new methanol-free peroxide emulsions have been developed to serve the US PVC industry. Such water-based peroxide formulations are intrinsically safer than solvent based ones.

Organic peroxide suspensions and emulsions are supplied in HDPE cans or in stainless steel and composite IBCs. Bulk transport of peroxide emulsions is carried out by a temperature controlled manifold trailer equipped with multiple stainless-steel IBCs allowing direct transfer to a (refrigerated) storage tank.

Your safety Our priority

Nouryon is recognized as the global leader in organic peroxide safety. Our proven success in safely handling organic peroxides is due to our long-term commitment to developing and maintaining high safety standards. We at Nouryon always place safety as our top priority.

Sharing our experience in safety is one of the most important resources we offer. Through our safety programs we provide expert advice on the handling of our products including:

- classroom review of safety and handling of organic peroxides
- consultation on storage and dosing facility design
- demonstrations on the safe use, handling and control of organic peroxides

Our Safety Research Laboratory in Deventer, The Netherlands is heavily involved in R&D, ensuring the development of safe products and processes. Studies are carried out, in order to provide a high level of safety in manufacturing, handling and transport of dangerous goods.

In general organic peroxides are thermally unstable compounds, decomposing at relatively low temperatures. However, knowledge of proper handling techniques, carefully designed facilities and thorough training of personnel can overcome the hazards. Personnel who understand and pay proper attention will be able to handle organic peroxides confidently and safely.

Scan QR code to watch our short video on our safety services

Storage temperatures

SADT: Self-Accelerating Decomposition Temperature

The SADT is the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used in transport. Transportation temperatures are derived from the SADT according to the recommendations by the United Nations Committee of Experts on the Transport of Dangerous Goods.

T_s max.

The T_s max. given in the product list on pages 8-11 is the recommended maximum storage temperature at which the product is stable and quality loss will be minimal.

T_s min.

A minimum storage temperature (T_s min.) is given if phase separation, crystallization or solidification of the product is known to occur below the temperature indicated. We recommend that you store the product above the Ts min. indicated for quality and in some cases safety reasons.

T_{em}: Emergency temperature

The T_{em} is derived from the SADT and is the temperature at which emergency procedures must be implemented.

T_c Control temperature

The T_c is also derived from the SADT and is the maximum temperature at which the product can be safely transported. A T_c is not required if the SADT exceeds 50°C.

Both the T_{em} and T_c are related to safety and do no apply to product quality. To maintain product quality the recommended storage temperatures (T_s min. and max.) have to be observed.

UN Numbers

All products accepted for transport are assigned to generic entry numbers according to classification principles as described in the recommendations by the United Nations Committee of Experts on the Transport of Dangerous Goods. An explanation of all relevant UN numbers is given in Table 1.

Survey of thermal stability

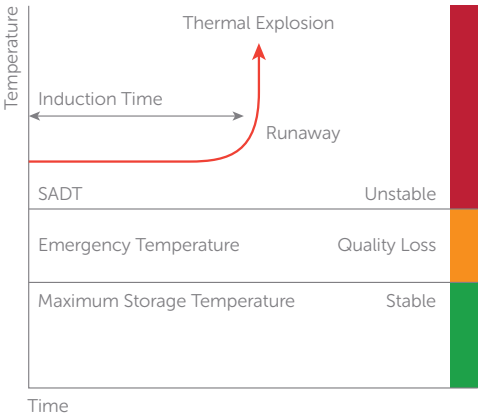
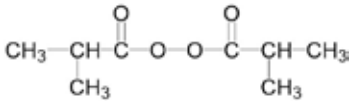
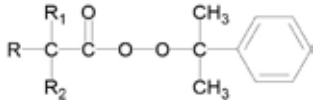
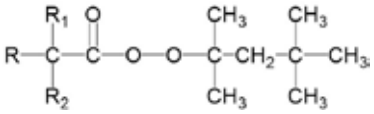
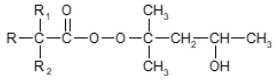
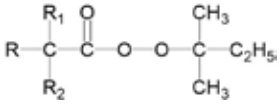
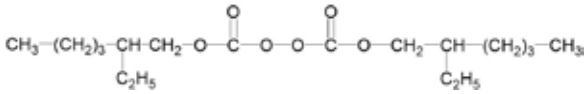


Table 1. Classification of organic peroxides

UN NO.	CLASSIFICATION	NOURYON HAZARD RATING	MAXIMUM CONTAINER SIZE
3103	type C; liquid	High	50 kg (110 lb)
3104	type C; solid		
3113	type C; liquid, temperature controlled		
3114	type C; solid, temperature controlled		
3105	type D; liquid	Medium	50 kg (110 lb)
3106	type D; solid		
3115	type D; liquid, temperature controlled		
3116	type D; solid, temperature controlled		
3107	type E; liquid	Low	400 kg (880 lb)
3117	type E; liquid, temperature controlled		
3108	type E; solid	Low	400 kg (880 lb)
3109	type F; liquid	Very low	IBC's / Tanks
3110	type F; solid		
3119	type F; liquid, temperature controlled		
3120	type F; solid, temperature controlled		
None	Non-dangerous good	No	Unrestricted
SELF-REACTIVE SUBSTANCES			
3234	type C; solid, temperature controlled	High	50 kg (110 lb)
3226	type D; solid	Medium	50 kg (110 lb)
3236	type D; solid, temperature controlled		

Scan QR code to watch our short video on how our safety services can support you.

Our PVC products

PRODUCT NAME	CHEMICAL NAME [CAS NUMBER]	GENERAL DATA		
		Molecular weight	Assay (%)	Active oxygen (%)
	Diisobutyryl peroxide [3437-84-1]	174.2		9.18
TRIGONOX 187-C30			30	2.76
TRIGONOX 187-W40			40	3.68
	Cumyl peroxyneodecanoate [26748-47-0]	306.4		5.22
TRIGONOX 99-C75*			75	3.92
TRIGONOX 99-W(E)50			50	2.61
	1,1,3,3-Tetramethylbutyl peroxyneodecanoate [51240-95-0]	300.5		5.32
TRIGONOX 423-C70			70	3.73
TRIGONOX 423-W50			50	2.66
	3-Hydroxy-1,1-dimethyl butylperoxyneodecanoate [95718-78-8]	264.4		6.05
TRIGONOX 193-C75*			75	4.54
TRIGONOX 193-W50			50	3.03
	tert-Amyl peroxyneodecanoate [68299-16-1]	258.4		6.19
TRIGONOX 123-C75*			75	4.64
	Di-sec-butyl peroxydicarbonate [19910-65-7]	234.2		6.83
TRIGONOX SBP			98	6.69
TRIGONOX SBP-C60*			60	4.10
TRIGONOX SBPS			98	6.69
TRIGONOX SBPS-C60*			60	4.10
	Di(4-tert-butylcyclohexyl) peroxydicarbonate [15520-11-3]	398.5		4.01
PERKADOX 16			95.5	3.83
	Di(2-ethylhexyl) peroxydicarbonate [16111-62-9]	346.5		4.62
TRIGONOX EHP-C75*			75	3.46
TRIGONOX EHP-W(E)60			60	2.77
TRIGONOX EHPS			98	4.53
TRIGONOX EHPS-C75*			75	3.46

Different solutions in dilluted peroxide formulations (see tables on page 8-11)

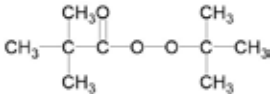
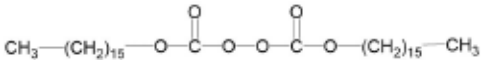
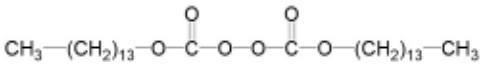
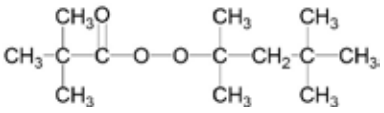
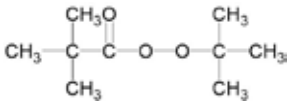
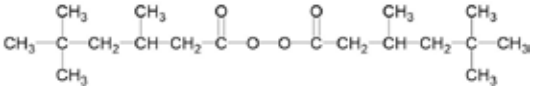
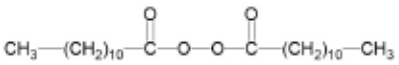
In diluted peroxide formulations the letter 'C' refers to Isododecane which is used exclusively in Europe, Middle East, India and Africa.

In the America's 'odorless mineral spirits' is used and products are indicated with "CH" to distinguish the different solvent.

In Asia our odorless mineral spirits' based products are indicated by "CL".

	STORAGE DATA		KINETIC DATA T (°C) FOR T1/2					SAFETY DATA				STANDARD PACKAGE TYPE
Physical form	T_s max. (°C)	T_s min. (°C)	0.1 h	1.0 h	10 h	A (1/s)	E_a (kJ/mole)	SADT (°C)	T_{em} (°C)	T_c (°C)	UN No.	
			57	39	23	3.37E+14	109.06					
in hydrocarbon solvent	-20							0	-10	-20	3115	HDPE can
emulsion in water and methanol	-25	-30						0	-10	-20	3119	HDPE can
	-25	-30						-5	-15	-25	3119	IBC
			75	56	38	3.12E+14	114.59					
in hydrocarbon solvent	-20							10	0	-10	3115	HDPE can
emulsion in water and (m)ethanol	-20	-25						5	-5	-15	3119	IBC
			76	57	40	3.98E+14	115.79					
in hydrocarbon solvent	-15							15	5	-5	3115	HDPE can
emulsion in water and methanol	-15	-20						15	5	-5	3119	HDPE can / IBC
			79	59	42	1.77E+14	114.27					
in hydrocarbon solvent	-20							10	0	-10	3115	Bottle
emulstion in water and methanol	-20	-25						15	5	-5	3115	HDPE can
			81	61	43	1.47E+14	114.38					
in hydrocarbon solvent	-15	-25						20	10	0	3115	HDPE can
			82	63	47	3.19E+15	123.85					
liquid	-20							0	-10	-20	3113	HDPE can / 4x8 lb jug/carton
in hydrocarbon solvent	-20							0	-10	-20	3113	HDPE can / 4x8 lb jug/carton
liquid	-20							0	-10	-20	3113	HDPE can / 4x8 lb jug/carton
in hydrocarbon solvent	-20							0	-10	-20	3113	HDPE can / 4x8 lb jug/carton
			82	64	48	7.44E+15	126.39					
powder	20							40	35	30	3114	carton
			83	64	47	1.83E+15	122.45					
in hydrocarbon solvent	-15	-25						5	-5	-15	3115	HDPE can
emulsion in water and (m)ethanol	-15	-25						5	-5	-15	3119	HDPE can
	-20	-25						0	-10	-20	3119	IBC
liquid	-20							0	-10	-20	3113	HDPE can
in hydrocarbon solvent	-15	-25						5	-5	-15	3115	HDPE can

Our PVC products

PRODUCT NAME	CHEMICAL NAME [CAS NUMBER]	GENERAL DATA		
		Molecular weight	Assay (%)	Active oxygen (%)
	tert-Butyl peroxyneodecanoate [26748-41-4]	244.4		6.55
TRIGONOX 23			95	6.22
TRIGONOX 23-C75*			75	4.91
TRIGONOX 23-W50			50	3.27
TRIGONOX 23-WE50			50	3.27
	Dicetyl peroxydicarbonate [26322-14-5]	570.9		2.80
PERKADOX 24-FL			94.5	2.65
PERKADOX 24L			91	2.55
PERKADOX 24-W35			35	0.98
	Dimyristyl peroxydicarbonate [53220-22-7]	514.8		3.11
PERKADOX 26			96	2.98
				
	1,1,3,3-Tetramethylbutyl peroxypivalate [22288-41-1]	230.3		6.95
TRIGONOX 425-C75*			75	5.21
				
	tert-Amyl peroxypivalate [29240-17-3]	188.3		8.50
TRIGONOX 125-C75*			75	6.37
TRIGONOX 125-W40			40	3.40
	tert-Butyl peroxypivalate [927-07-1]	174.2		9.18
TRIGONOX 25-C75*			75	6.89
				
	Di(3,5,5-trimethylhexanoyl) peroxide [3851-87-4]	314.5		5.09
TRIGONOX 36-C75*			75	3.82
TRIGONOX 36-W50			50	2.54
				
	Dilauroyl peroxide [105-74-8]	398.6		4.01
LAUROX			99	3.97
LAUROX W-40			40	1.61
LAUROX W-40-GD4			40	1.61

* Listed are the highest concentrations of formulations available; lower concentrations may also be available – depending on region

Physical form	STORAGE DATA T_s max. (°C)	T_s min. (°C)	KINETIC DATA T (°C) FOR T1/2 0.1 h	1.0 h	10 h	A (1/s)	E_a (kJ/mole)	SAFETY DATA SADT (°C)	T_{em} (°C)	T_c (°C)	UN No.	STANDARD PACKAGE TYPE
			84	64	46	1.52E+14	115.47					
liquid	-10	-30						15	5	-5	3115	HDPE can
in hydrocarbon solvent	-10	-20						20	10	0	3115	HDPE can
emulsion in water and methanol	-10	-25						20	10	0	3119	HDPE can
	-10	-25						15	5	-5	3119	IBC
emulsion in water and ethanol	-10	-20						15	5	-5	3119	IBC
			84	65	48	3.02E+15	124.30					
flakes	20							40	35	30	3120	carton
powder	20							40	35	30	3120	carton
suspension in water	15	0						40	35	30	3119	IBC
			84	65	48	2.82E+15	124.10					
flakes	15							35	25	20	3116	carton
			86	66	48	2.47E+14	117.50					
in hydrocarbon solvent	-15	-25						20	10	0	3115	HDPE can
			91	72	55	4.12E+15	127.76					
in hydrocarbon solvent	-10	-30						25	15	10	3113	HDPE can
emulsion in water and methanol	-10	-25						25	15	10	3119	HDPE can
			94	75	57	7.09E+14	123.59					
in hydrocarbon solvent	-5	-15						20	10	0	3113	HDPE can
			96	77	59	2.84E+15	128.34					
in hydrocarbon solvent	0	-25						20	10	0	3115	HDPE can
emulsion in water and methanol	0	-22						25	15	10	3119	HDPE can / IBC
			99	79	61	3.92E+14	123.37					
flakes	30							50	45	40	3106	carton
suspension in water	20	0						50	45	40	3109	IBC
suspension in water	20	0						50	45	40	3109	IBC

Secondary suspending agents

We offer a wide range of polyvinyl alcohol (PVA) secondary suspending agents, which are used to control PVC porosity and to improve drying and stripping. This includes solvent based products and aqueous emulsions.

The Active® 45/Ethapol® 55 product range contains solvents. The DCloud® and Ethapol® water-based suspending agents can be charged to a hot PVC reactor. In combination with organic peroxide emulsions they provide excellent PVC characteristics and reduced 'fish eye' levels. In addition, water-based suspending agents are environmentally friendly due to the absence of an organic solvent. Ethapol® MPG product is a secondary PVA, which also has excellent antifoaming properties. Antifoaming agents are essential for optimal performance of a PVC reactor preventing foaming in both the reactor and PVC stripping sections.

Our suspending agents can be supplied in drums and intermediate bulk containers (IBC's). Please contact one of our experts for more information about our packages.

PRODUCT NAME CHEMICAL NAME (CAS NR.)	PHYSICAL FORM	MAIN APPLICATIONS				
		SOLID CONTENT (%)	DoH*	S-PVC	CO-POLYMERS (VCM/VAM)	E-PVC
SOLVENT-BASED						
Polyvinyl acetate partially hydrolyzed [25213-24-5]						
ACTIVE 45	solution in ethanol and ethyl acetate	40	45	•	•	•
ETHAPOL 55	solution in water and ethanol	40	58.5	•	•	•
WATER-BASED						
Polyvinyl acetate partially hydrolyzed [25213-24-5]						
DCLOUD 35	emulsion in water	40	36	•	•	•
DCLOUD 45	emulsion in water	35	46	•	•	•
ETHAPOL MPG	emulsion in water	28	70.5	•	•	•

* DoH = Degree of hydrolysis

Antifouling agents

Nouryon is the world's number one supplier of brands like Noxol® and Everplus® antifouling agents. The products are applied with high pressure steam for coating of the reactor wall or internal parts such as stirrer, baffles, reflux condenser or cooling coils. This coating prevents unwanted PVC formation and deposits.

The Noxol brand is recognized as the worldwide market leader in antifouling. It provides better adhesion to the reactor wall, while its functional groups protect against negative interaction with oxygen. Noxol® is known for its light color and transparency, which are the clearest visual distinctions from all other antifouling agents available in the market.

PRODUCT NAME CHEMICAL NAME (CAS NR.)	PHYSICAL FORM	MAIN APPLICATIONS				
		SOLID CONTENT (%)	S-PVC	CO-POLYMERS (VCM/VAM)	E-PVC	MASS PVC
NOXOL ETH	solution in water and ethanol	20	•	•	•	
NOXOL ETH/S3	solution in water and ethanol	10	•		•	
NOXOL WSW	solution in water	5.5	•	•	•	
NOXOL WSW/D7	solution in water	7	•	•	•	
NOXOL WSW/D9	solution in water	9	•	•		
EVERPLUS	solution in water	5.5	•	•	•	•

The antifouling agents can be supplied in bottles, drums and intermediate bulk containers (IBC's). The products are kept under nitrogen atmosphere protecting against oxidation.

Continuous Initiator Dosing (CiD)

The standard in PVC production

Continuous Initiator Dosing is a revolutionary concept which increases PVC production capacity by 20-40% while making the PVC process intrinsically safer. In addition to improving PVC quality and consistency, CiD helps to reduce costs. CiD has already been implemented successfully at several production locations around the world.

In traditional PVC production the reactor is loaded with the raw material VCM monomer and water in the first step of the process. Then the total amount of organic peroxides needed for the polymerization is added. The temperature is increased, and the peroxides initiate the polymerization reaction.

During the reaction, a lot of heat is produced, and the capacity of the reactor is determined by the maximum cooling capacity.

With CiD, the heat production in the reactor is controlled by the quantity of peroxide dosed throughout the polymerization process. To achieve this, a control valve is installed and a special fast peroxide, **Trigonox® 187** , is used. As a result, the cooling capacity is optimized, and the batch time is reduced, increasing the overall capacity. The reaction can be stopped and restarted at any time by simply interrupting or restarting the peroxide dosing.

During the polymerization process a minimum peroxide level is present at any time ensuring intrinsic process safety.

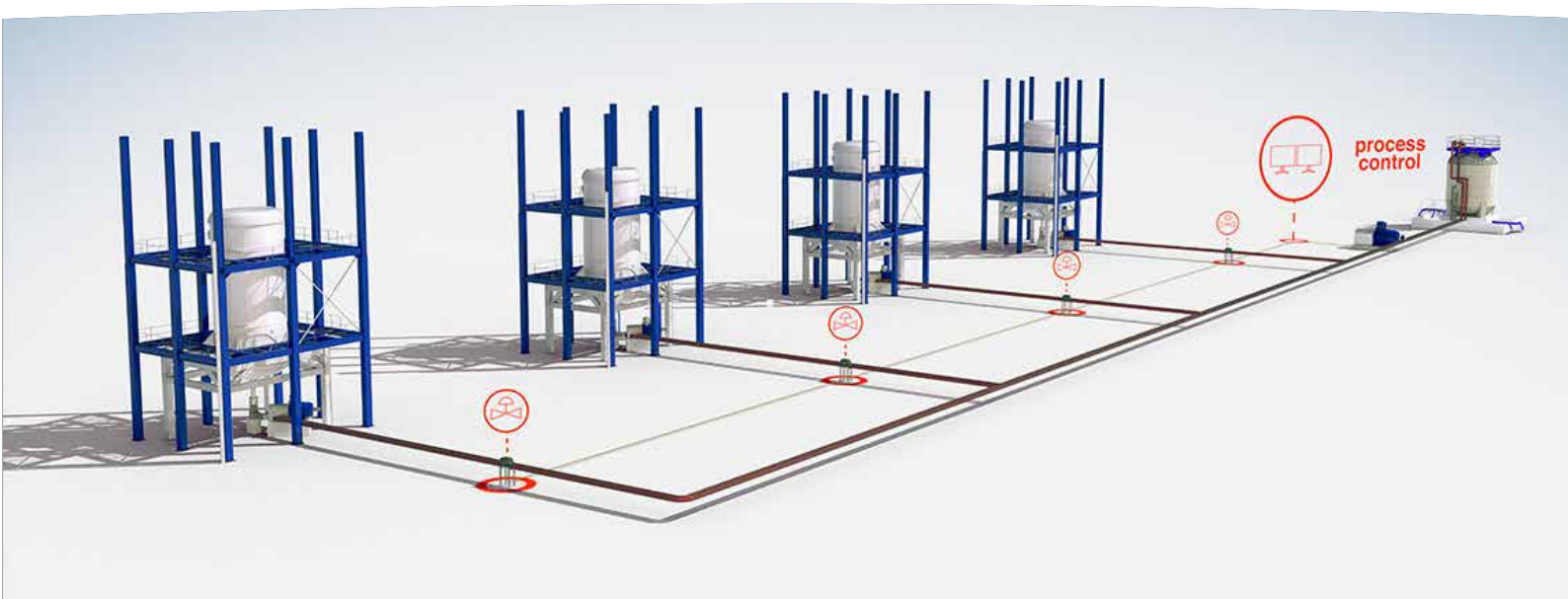
We provide licenses for the use of the patented CiD technology and supports production test runs with mobile initiator dosing units.

In short, with CiD you can:

- Enhance reactor output by 20-40% with limited investments
- Make your production process intrinsically safer
- Achieve positive effects on product and process consistency
- Improve PVC quality
- Reduce costs

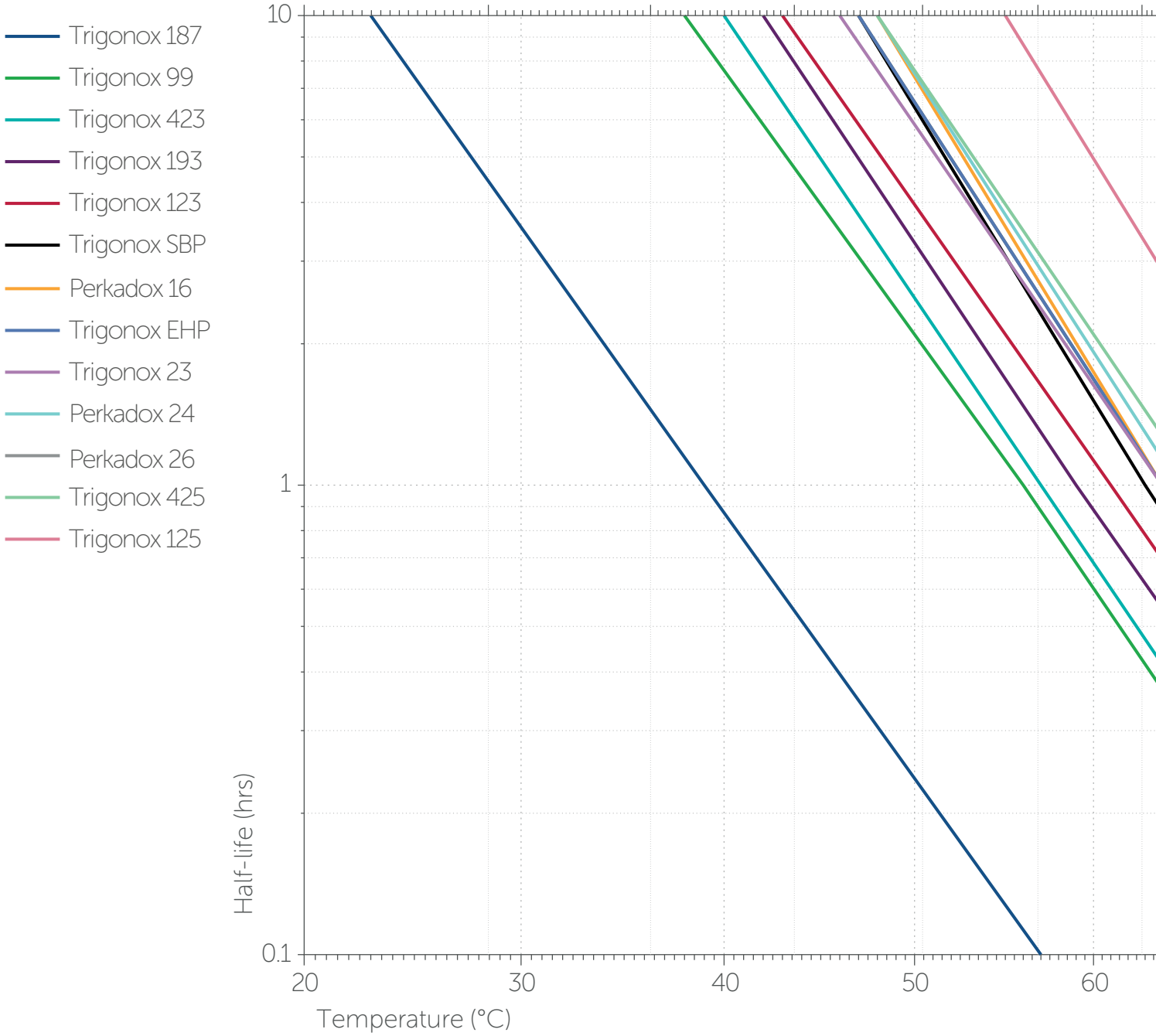
Please contact your Nouryon representative or contact us via nouryon.com to learn more about CiD

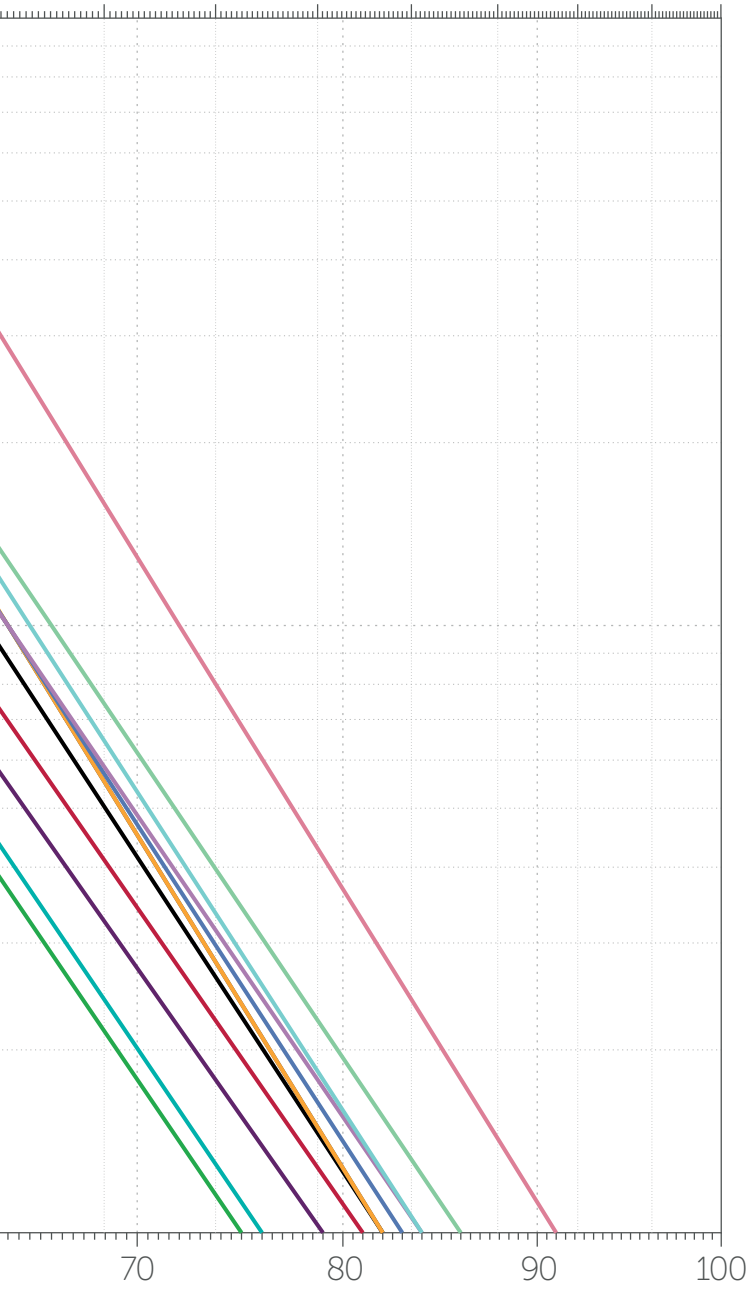
Scan QR code to watch our short video on CiD



Half-life chart/Kinetic data

The most important characteristic of a polymerization initiator is its rate of decomposition expressed by its half-life (t½). The half-life is the time required to reduce the original amount of peroxide at a given temperature by 50%.





Kinetic Data

With the exception of hydroperoxides, the half- life is determined by differential scanning calorimetry-thermal activity monitoring (DSC-TAM) of a dilute solution of the initiator in monochlorobenzene. Kinetic data of the decomposition of hydro-peroxides in monochlorobenzene are determined titrimetrically.

The tables in this catalog list the temperatures at which the half-lives are 0.1 hour, 1.0 hour and 10 hours.

The half-life can be calculated from the Arrhenius equation

$kd = A \cdot e^{-Ea/RT}$ and $t1/2 = \ln 2/kd$

The Arrhenius frequency factor (A) and activation energy (Ea) are given in the tables on pages 8-11.

The residual concentration of the initiator can be calculated by means of the equation

$[I] = [I0] \cdot e^{-kd \cdot t}$

The initiators in the tables on pages 8-11 are arranged in descending order of activity, based on the 1.0 hour half-life temperature.

k_d = rate constant for the initiator dissociation in s^{-1}
A = Arrhenius frequency factor in s^{-1}
E_a = Activation energy for the initiator dissociation in J/mole
R = 8.3142 J/mole.K
T = temperature in K
$t_{1/2}$ = half-life in s

$[I_0]$ = original initiator concentration
[I] = initiator concentration at time t
t = time measured from the start of decomposition in s

Contact us

For product inquiry and ordering information, please contact your Nouryon account manager or regional Nouryon sales office.

Americas

US and other countries
Citadel Center
131 S Dearborn St, Suite 1000
Chicago IL 60603-5566
USA
E polymer.amer@nouryon.com

Mexico
Av. Morelos No. 49
Col. Tecamachalco
Los Reyes La Paz Estado de Mexico
C.P. 56500 Mexico
T +52 55 5858 0700
E polymer.mx@nouryon.com

Brazil
Rodavia Nouryon no. 707
Portão A – Planta C
Bairro São Roque da Chave
13295-000 Itupeva - São Paulo
Brazil
T +55 11 4591 8800
E polymer.sa@nouryon.com

Europe, India, Middle East and Africa

France, Italy, Spain and Portugal
Autovia de Castelldefels, km 4.65
08820 El Prat de Llobregat
Barcelona
Spain
T +34 933 741991
E polymer.es@nouryon.com

India
North Block 102, 1st Floor, Empire Tower, Reliable Cloud City Campus,
Off Thane – Belapur Road
Airoli, Navi Mumbai - 400708
India
T +91(0) 22 68426700
E polymer.india@nouryon.com

Middle East
Nouryon Saudi Arabia
King Saud Road, Kanoo Tower
P.O. Box 37
31411 Dammam
Saudi Arabia
T + 96 61383 46526
E communications.me@nouryon.com

Other countries
Zutphenseweg 10
7418 AJ Deventer
The Netherlands
E polymer.emeia@nouryon.com

Asia Pacific
Room 2501 & 26F, Building A
Caoheijing Center
No. 1520 Gumei Road, Xuhui District
Shanghai 200233
P.R. China
T +86 21 2289 1000
E polymer.apac@nouryon.com

Additional information

Product Data Sheets (PDS) and Safety Data Sheets (SDS) for our polymerization initiators are available at nouryon.com

For information on our antifouling and secondary suspending agents please contact us. On request we also provide specific publications on the use and the safe handling and storage of our products.